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NOTES ON NORTH AMERICAN THYSANOPTERA, WITH DESCRIPTIONS OF A NEW FAMILY AND TWO NEW SPECIES

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Suborder TEREBRANTIA

Family MEROTHRIPIDÆ, new family

This family is erected for the anomalous genus *Merothrips* Hood, which contains the single North American species *morgani*. In structure it is intermediate in many respects between the Tubulifera and Terebrantia,¹ and in habitat is very suggestive of the former. As only one genus and species is known, it seems best not to attempt a definition of the family, but rather to emphasize the most striking characteristics, which are as follows:

Antennæ moniliform, without apical stylus and without sense cones, but with a tympanum-like area on segments 3 and 4. Mouth cone semi-circular in form. Pronotum with dorsal sutures. Anterior and posterior femora greatly enlarged. Ovipositor very weak, probably functionless.

Merothrips morgani Hood.

1912. *Merothrips morgani* Hood, Proc. Ent. Soc. Wash., Vol. XIV, p. 132, Pl. V, figs. 1-3.

One female was taken by Mr. W. L. McAtee and the writer under dead willow bark on Plummer's Island, Maryland, October 5, 1913; and on January 16, 1914, another female was found by Mr. R. C. Shannon, hibernating in a bird's nest, in Potomac Park, Washington,

¹Dr. H. Karny, of Vienna, in a recent letter, received since the above was written, says: "Was Ihr Genus *Merothrips* betrifft, so halte ich dieses für sehr wichtig und interessant: nach Ihrer Beschreibung möchte ich glauben, dass es sich um eine neue, zwischen den Terebrantien und Tubuliferen intermediäre Familie handelt."

D. C. The species was previously known only from three females and one male, taken in Illinois and Kentucky.

Scirtothrips brevipennis, new species.

Female: Length about 0.82 mm. General color light yellow ochre, head whitish, prothorax shaded with gray; antennæ brown beyond first segment, bases of intermediate segments gray; legs yellowish gray.

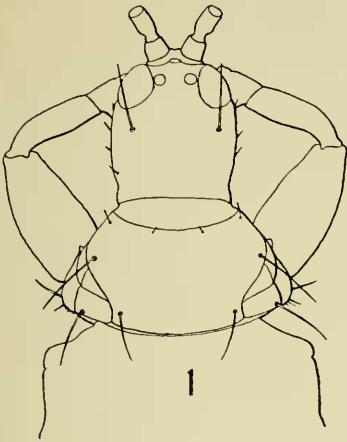
Head twice as wide as long and three-fourths as long as prothorax, rounded anteriorly; frontal costa not visible from above; cheeks slightly arcuate. Eyes not protruding, about three times as long as their distance from posterior margin of head and three-fourths as wide as their interval, setose. Ocelli approximate, opposite center of eyes. Antennæ about 3.2 times as long as head, formed as usual in the genus; segment 1 pale yellow; 2-8 dark brown, the intermediate segments paler basally, 4 and 5 each with a narrow, almost black ring at base. Maxillary palpi 3-segmented.

Prothorax nearly twice as wide as long and about 1.3 times as long as head; ochraceous pigment denser along lateral and posterior margins; pronotum with minute, close, transverse striæ, and about 20 scattered, dark bristles, the pair at the posterior angles much the longest, nearly equal in length to eyes. Pterothorax about 1.3 times as wide as prothorax, ochraceous pigment denser at sides. Wings of fore pair uniform gray in color, hind wings pale, with dark median line; fore wings about nine times as long as greatest basal width exclusive of scale, 2.5 times as long as antennæ and four times as long as width of head; anterior vein of fore wings with about five or six dark bristles in basal half and three dark, nearly equidistant ones in apical half; posterior vein with three similar bristles in apical half.

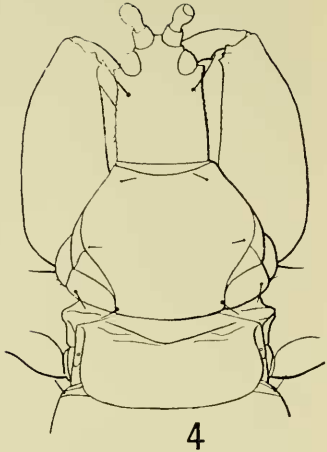
Abdomen widest at about fifth segment, lemon yellow along middle and at tip, almost raw sienna at sides; bristles dark in color.

Measurements of holotype: Length 0.816 mm.; head, length 0.072 mm., width 0.150 mm.; prothorax, length 0.096 mm., width 0.180 mm.; pterothorax, width 0.240 mm.; abdomen, width 0.242 mm. Antennal segments: 1, 19 μ ; 2, 37 μ ; 3, 43 μ ; 4, 40 μ ; 5, 38 μ ; 6, 43 μ ; 7, 7 μ ; 8, 12 μ ; total length of antenna, 0.23 mm., width at segment 4, 0.017 mm.

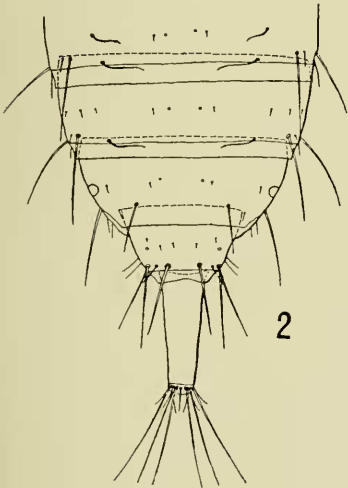
Described from eight females, taken on red cedar (*Juniperus virginiana* L.), Plummer's Island, Maryland, May 18, 1913, by W. L. McAtee and the writer.



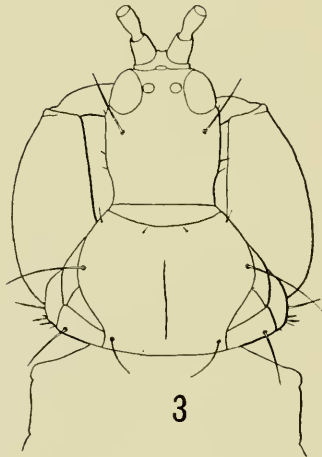
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4



2



3

TRICHOTHRIPS

Fig. 1.—*Trichothrips karnyi*, new species, head and prothorax of macropterous female, greatly enlarged; holotype.

Fig. 2.—*Trichothrips karnyi*, abdominal segments 6-10 of macropterous female, greatly enlarged; holotype.

Fig. 3.—*Trichothrips karnyi*, head and prothorax of macropterous male, greatly enlarged; allotype.

Fig. 4.—*Trichothrips flavicauda* Morgan, head and prothorax of brachypterous male, greatly enlarged.

A distinct little species, easily separable from all others of its genus by the antennal coloration and the short wings. At the time of its capture it was abundant on several cedar trees on the island, but was mistaken for a commoner species, the error being detected too late to secure more material.

Haplothrips statices (Haliday).

1836. *Phl. [æothrips] Statices* Haliday, Ent. Mag., Vol. III, p. 442.
 1843. *Hoplothrips statices* Amyot et Serville, Hist. Nat. Ins. Hémipt., p. 640.
 1852. *Phlæothrips flavipes* Heeger, Sitzungsber. d. Akad. Wiss., Wien, Vol. IX, p. 127; Tab. XVI.
 1883. *Phlæothrips nigra* Osborn, Can. Ent., Vol. XV, p. 154.
 1887. *Phlæothrips armata* Lindeman, Bull. Soc. Imp. Nat. Moscou, p. 335.
 1895. *Anthothrips statices* Uzel, Monogr. d. Ordn. Thys., p. 237; Tab. III, fig. 26, Tab. VII, figs. 128-130.
 1895. *Anthothrips nigra*, idem, ibidem, p. 242.
 1902. *Anthothrips niger* Hinds, Proc. U. S. Nat. Mus., Vol. XXVI, p. 188; Pl. VII, figs. 72-75.
 1912. *Haplothrips statices* Karny, Zool. Ann., Vol. IV, p. 325.
 1912. *Haplothrips niger*, idem, ibidem.

This abundant, destructive species was redescribed by Osborn under the name *Phlæothrips nigra*. The North American examples at hand are inseparable from authentic European ones received from Mr. Bagnall. It is often very abundant in the flowers of clover and the common daisy (*Chrysanthemum leucanthemum* L.), and may possibly have been introduced with the latter plant from Europe.

Trichothrips flavicauda Morgan. (Pl. I, fig. 4).

1913. *Trichothrips flavicauda* Morgan, Proc. U. S. Nat. Mus., Vol. 46, p. 28, figs. 50-54.

One female of this species was taken by the writer at Bluemont, Virginia, August 31, 1913, from a dead branch of papaw; and two females and one male were found by Mr. W. L. McAtee and myself under dead willow bark on Plummer's Island, Maryland, October 5, 1913.

The females agree well with the original description of the species, but the male differs from the description and drawing of that sex in the more acute projections at the side of the eyes, the longer tarsal tooth, and the longer fore femora, the latter just attaining the front of the head. These discrepancies, though great, are probably due to individual variation. A most unusual characteristic of the male seems to have been overlooked, however, by the original describer. This is the presence on the inner

surface of the fore femur of three subapical, triangular teeth, between which, when the leg is flexed, fits a similar tibial tooth—a remarkable structure, known before only in the rather distantly related genus *Hoplandrothrips*.

Trichothrips karnyi, new species (Pl. I, figs. 1–3).

Female (*forma macroptera*): Length about 2.2 mm.; width of prothorax about 0.43 mm. Color nearly uniform light blackish brown, pterothorax and both ends of tibiæ slightly paler; fore tibiæ, all tarsi, articulations of legs, and bases of intermediate antennal segments yellow or yellowish.

Head distinctly longer than wide, rounded in front, noticeably constricted at its insertion into prothorax; dorsal and lateral surfaces with anastomosing lines and several short, stout, conspicuous spines; postocular bristles about half as long as head, pointed. Eyes about one-third as long as head, their axis of greatest dorsal length nearly coinciding with a line drawn from base of first antennal segment to anterior end of gena. Ocelli nearly equidistant, moderately large; posterior pair slightly in front of centers of eyes; anterior ocellus directed forward. Antennæ slightly less than twice as long as head, 8-segmented; segments 3–7 subclavate, pedicellate, 3 about 2.5 times as long as greatest width; 8 lanceolate, subpedicellate; color blackish brown, except apex of 2, basal three-fifths of 3, basal two-fifths of 4, basal third of 5, and pedicel of 6, which are usually pale yellow. Mouth cone very slightly longer than wide, the apical half almost perfectly semicircular in form; maxillary and labial palpi 2-segmented, basal segments very short.

Prothorax trapezoidal, about two-thirds as long as head and (inclusive of coxæ) slightly more than twice as wide as long; all usual bristles present, pointed; anterior marginals minute, midlaterals and the two pairs at the posterior angles subequal, much the longest; coxal bristles four or five in number, the anterior about twice as long as the others, equal in length to anterior angulars. Pterothorax distinctly wider than prothorax, sides straight and converging posteriorly. Wings lightly washed with brown, the hind pair with a median brown line; subapical fringe of fore wings with about 10 interlocated hairs on posterior margin. Legs rather stout; fore femora slightly swollen; fore tarsi with a stout acute tooth usually about as long as width of tarsus.

Abdomen large and heavy, slightly wider than pterothorax, broadly